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Address: Niels Krabbe, Zoological Museum, University of Copenhagen, Universitetsparken 15, DK-2100 Copenhagen Ø, Denmark.

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Requiescat for *Tricholimnas conditicius*, a rail that never was

by Storrs L. Olson

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An unfortunate number of birds were described from a single specimen only, never to be found again. A prevalent trend in ornithology has been to discount and ignore unique types, yet with proper evaluation of their morphology, in combination with careful review of the circumstances of their acquisition, the species founded on them can often be resurrected, adding to our knowledge of previous avian diversity (e.g. Olson 1986a,b, Graves & Olson 1987, James *et al.* 1989, Olson *et al.* 1989).

A discounted species consigned to oblivion for the past 40 years is the presumably flightless rail *Tricholimnas conditicius* Peters & Griscom, 1928. Recently, however, Walters (1987), on the basis of circumstantial historical evidence, concluded that this was a validly described species. To attempt to resolve the issue, I studied both the unique holotype and additional historical evidence, but with opposite result, as I have concluded that *T. conditicius* is not, in fact, a valid species.

Historical review

Much in the original description and subsequent assessment of *T. conditicius* has been marred by errors of judgement, interpretation, or

procedure, beginning with the spelling of the species' name itself. There seems no justification for the orthography "*conditicius*", which is surely based on the Latin verb *condo*, hide (rather than the adjective *conditus*, meaning savory or seasoned), the actual word intended probably being *conditivus*, meaning laid away or preserved, which is certainly applicable to the holotype.

Peters & Griscom (1928) described *T. conditicius* from a specimen skinned from alcohol that had been found "in the Museum of Comparative Zoology [MCZ] after a period of long oblivion. With it was a label: 'Kingsmill Islands, 1861, Andrew Garrett, Collector'" (Greenway 1952: 1). Peters & Griscom (1928) established that Garrett had been on the island of Apaiang (= Abaiang) in the Kingsmill [= Gilbert] group in 1859, whence they assumed the rail had come, the date 1861 being surmised as that of the collection's receipt at the museum.

Peters & Griscom (1928:102) made no comparisons with *Tricholimnas lafresnayanus* of New Caledonia, the type of the genus, but only with Slater's (1870) description and Mathews' (1928) plate of *T. sylvestris*, the flightless 'woodhen' of Lord Howe Island, a species of which they said "there is no material available in this country with which to make an actual physical comparison". This is curious because the MCZ possesses a complete skeleton of *T. sylvestris* (MCZ 363) that was purchased from E. Gerrard, Jr., and received 30 August 1878. It is still the only skeletal specimen of the species in any New World museum (Wood & Schnell 1986).

Rather than making comparisons with this skeleton, Peters & Griscom published notes made by G. M. Allen comparing the body skeleton of *T. conditicius* with that of a King Rail *Rallus elegans* (presumably MCZ 3316, the trunk of a specimen collected in 1921, the only skeletal material of *R. elegans* in the MCZ collections). Why did Allen not compare the skeleton of *T. conditicius* with the specimen of *T. sylvestris* that had then been at Harvard for nearly 50 years? One possibility is that the latter was received in alcohol and was not prepared as a skeleton until after 1928. On the other hand, given the priorities of the day, it is more likely that an alcoholic specimen, unless badly damaged (and the skeleton is in excellent condition), would have been prepared as a skin. The failure of Peters, Griscom, or Allen to consult the MCZ specimen of *T. sylvestris*, whatever its manner of preservation in 1928, is an oversight that cannot now be explained.

The body skeleton of the unique holotype of *T. conditicius*, incredible as it may seem, was not saved; at least it can no longer be found in the MCZ collections. Likewise, the stomach contents of the specimen ("seeds of two species, the chitinous shell of a small beetle, and an entire harvest fly"; Allen in Griscom & Peters 1928: 103) were also evidently discarded, although, as noted by Walters (1987), these might have helped to determine the geographical origin of the bird. Harvest fly is another term for a cicada (Homoptera) and cicadas are found on Lord Howe Island and in the Marshalls and Gilberts (R. Froeschner, pers comm.), so this fact does not help to resolve the origin of the specimen.

Greenway (1952) discovered an unpublished communication from Garrett stating that on Apaiang: "There is only one species of land bird

and this I never saw but obtained one of its tail feathers which I send you. I think it is a species of Hawk." Greenway could not find this feather but hypothesized that because migrant hawks had been reported from Palau, such a stray may have reached Apaiang. Amerson (1969: 229) has more plausibly suggested that this feather likely came from the widespread migrant cuckoo *Urodynamis taitensis*. Regardless, Garrett's note provides conclusive evidence that the rail in question was not obtained on Apaiang.

Greenway (1952) compared the type of *T. conditicius* with a series of *T. sylvestris* and found no differences other than slightly smaller size, which he attributed to immaturity, as Allen had stated that the skeleton indicated the specimen was obviously an immature. Greenway (p. 3) considered that "the weight of evidence points to [the type of *T. conditicius*] having come from Lord Howe Id. It is probable that it found its way into Andrew Garrett's collection by an exchange, or perhaps through the good offices of a whaling friend." Greenway regarded *T. conditicius* as a probable synonym of *T. sylvestris*, and the species accordingly sank into oblivion.

Recently, however, Walters (1987) revived the issue by reviewing Garrett's itinerary and suggesting that the type of *T. conditicius* could have been obtained on the island of Ebon in the southern Marshall group, where Garrett also landed. Although he did not examine the specimen, his review of documentary evidence led him to conclude that *T. conditicius* was a validly described species.

The specimen evidence

I examined the holotype of *Tricholimnas conditicius* (MCZ 21943) and made comparisons directly with two specimens of *T. sylvestris* lent for the purpose (AMNH 545298, 545345). I later compared the entire large series of *T. sylvestris* at the American Museum of Natural History with colour photographs of the type of *T. conditicius*. The latter was diagnosed as being "similar to *Tricholimnas sylvestris* of Lord Howe Island but much smaller; wing coverts less conspicuously chestnut" (Peters & Griscom 1928: 102), but I could find absolutely no consistent differences in plumage. The size is small, and the proportions of the bill are somewhat different from adults of *T. sylvestris*, but are almost exactly duplicated by two immature birds of that species (AMNH 545297, 545318).

One possible character that has never been mentioned is that the feet in the type of *T. conditicius* are orangish in colour whereas in most specimens of *T. sylvestris* they are a dark brownish leaden colour. There is some variation, however, and certain specimens have a more reddish or orangish cast to the feet. In one individual of *T. sylvestris* (AMNH 545363) the feet were distinctly orangish, just as in the type of *T. conditicius*. Interestingly, this specimen had also been prepared from spirits.

Thus, like Greenway, I was unable to find any morphological features by which *Tricholimnas conditicius* could be separated from *T. sylvestris*, at any level.

The evidence against a Micronesian origin for *T. conditicus*

To begin with, it is hardly conceivable that two flightless species could evolve independently on islands some 4500 km apart and show no morphological differentiation from one another. Secondly, Ebon atoll is nearly as poor a candidate to have been home to a large flightless rail in 1859 as was Apaiang. An overlooked early report on the natural history of Ebon is that of Rev. E. T. Doane (1861: 322), the ornithological portions of which are quoted here in full:

This atoll is the home for a few varieties of birds. But in this feature of the island, the contrast is as wide between the "low coral" island and the "high volcanic" one—as between their natural features. The high islands of Micronesia are largely supplied with the feathery tribe,—but this atoll can claim only a few birds—and with two or three exceptions these are all water fowl. There are a few Columbidae, *Carpophaga* [*Ducula*] *oceanica*, which manage to elude the keen search of the natives. These birds are occasionally heard cooing away in the tops of some quite isolated bread-fruit tree. A *Cuculus* [doubtless *Urodynamis taitensis*] gives forth occasionally its sharp whistle—and these, with the addition of another land bird whose species I have not been able to learn—are all the feathery songsters this atoll can claim.

The shores of the reef at low tide, and the bare rocks, are a little enlivened by the brown and white Heron. Small flocks of snipe (*Scolopax*) gather on the sand bars—or single individuals are running along the beach picking up food. An occasional plover (*Charadrius*) is to be seen. Sea swallows (*Sterna stolida* and *Sterna minuta*) are skimming the waters of the lagoon, or resting on the beach. A booby (*Lula* [*sic = Sula*]) now and then is seen sailing over the island. His home is unknown to the natives. His want of caution is clearly seen in the easy way a native will ascend a tree in which the bird is roosting, and with a slip-noose capture him. An interesting explanation of the origin of the single variety of the *Cuculus* is given by the natives—so skillful has this bird been in concealing its birth-place. As the natives find it only full grown they say that it is born and nourished in the clouds and falls to the earth of full size. [The Long-tailed Cuckoo is a migrant in Oceania that breeds only in New Zealand.]

This appears to be a reasonably accurate and perceptive report. The unknown land bird mentioned is almost certainly the fruit dove *Ptilinopus marshallianus* coincidentally described by Peters & Griscom (1928) in the same paper as *Tricholimnas conditicus* from a single specimen, still unique, obtained on Ebon by the missionary B. G. Snow in "the late fifties or early sixties of the last century", but not forwarded to the MCZ until 1876 (Barbour in Peters & Griscom 1928: 99). Doane's list adds considerably to the previously recorded native avifauna of Ebon, which according to Amerson (1969) consisted only of the *Ptilinopus* and the noddy *Anous tenuirostris*. The Reverends Doane and Pierson established a mission on Ebon in 1857 (U.S. Hydrographic Office, Bureau of

Navigation, 1870, Marshall Group, North Pacific Islands, 1:33 [original not seen]). Doane's report was communicated from Ebon on 16 August 1860 and thus covered the period of Garrett's visit in 1859. Had Garrett obtained a flightless rail on Ebon, either himself or through the missionaries, this fact would hardly have been unknown to Doane or have gone unmentioned by him.

Greenway (1952) assumed that Garrett obtained the type of *T. conditicius* from another source, who in turn had obtained it from Lord Howe Island. However, I believe that the nature of the man and the supposed timing of acquisition of the specimen militate against *any* association between Andrew Garrett and *T. conditicius*.

Greenway (1952), although acknowledging Garrett's genius as a scientist, in referring to him as a dealer may have given an impression of Garrett as an indiscriminate accumulator of natural history objects for commerce. Although Garrett certainly sold specimens to support his collecting activities, he was, in fact, a dedicated marine biologist who made many serious contributions to the scientific literature of fishes and marine invertebrates (Thomas 1979, Clench 1979). He had little personal interest in birds, however. We must ask, therefore, why Garrett would have been involved in an *exchange* for a specimen of bird that he never bothered to call to the attention of any ornithologist.

Garrett supposedly obtained the type of *T. conditicius* about 1850 and certainly prior to 1861—fully a decade before specimens of the Lord Howe Island woodhen, *T. sylvestris*, were obtained and formally described (see Bennett 1870, Sclater 1870). In reviewing some of the literature on the natural history of Lord Howe Island, it would appear that most, if not all, traffic in natural history specimens from Lord Howe was through naturalists in London via Sydney (e.g. Hindwood 1940, Iredale 1940). It makes no sense that Garrett, based then in Hawaii, could have obtained, during or shortly after his collecting trip to the Gilberts in 1859, a specimen of a bird from Lord Howe Island ten years before an example of the same species reached London.

I conclude that the entire problem is probably traceable to an early curatorial error at the MCZ in which a fluid-preserved specimen of *Tricholimnas sylvestris* from Lord Howe Island was wrongly associated with an old label from one of Garrett's collections. In this connection it is worth noting that other early specimens of *T. sylvestris* were originally supplied in spirits. I have already alluded to the MCZ skeleton possibly having been originally in alcohol. Likewise there are three dataless skins from the Rothschild collection that are marked as having been prepared "from spirits" (AMNH 545363-5).

In summary, all available morphological and historical evidence points to the type of *Tricholimnas conditicius* Peters & Griscom, 1928, being The former name should thus fall back into synonymy.

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Address: Storrs L. Olson, Dept. of Vertebrate Zoology, National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20560, U.S.A.